WHAT IS CLAIMED IS:

1. A method of requesting an uplink data retransmission in a CDMA (Code Division Multiple Access) communication system using a downlink dedicated physical channel (DL DPCH) to which a downlink dedicated physical control channel (DL DPCCH) and a downlink dedicated physical data channel (DL DPDCH) are mapped, the DL DPCCH having a transport power control (TPC) field, a transport format combination indicator (TFCI) field, and a pilot field, and the DL DPDCH having first and second data fields for delivering downlink data, comprising the steps of:

receiving data on an enhanced uplink dedicated channel (EUDCH), generating a p-bit acknowledgement (ACK) if the received data is normal, and generating a p-bit non-acknowledgement (NACK) if the received data is abnormal;

determining a bit position to transmit the ACK or NACK at in the first and second data fields of the DL DPDCH; and

puncturing p bits in the determined position, inserting the ACK or NACK in the punctured bit positions, and transmitting the DL DPCH with the ACK or NACK.

2. The method of claim 1, wherein the ACK or NACK is transmitted in one of N slots forming a transmit time interval (TTI) of the DL DPCH.

3. The method of claim 2, wherein the position to transmit the ACK or NACK at is randomly determined according to the number of data bits transmitted on the DL DPDCH and the number (p) of bits required to transmit the ACK or NACK.

4. The method of claim 2, wherein the position to transmit the ACK or NACK is determined by

$$\mathbf{P(i) = rand(N_{data} - p + 1)}$$

where P(i) indicates a position to transmit the ACK/NACK in an ith slot, N_{data} is

the number of data bits in one DL DPCH slot, p is the number of bits required to transmit the ACK/NACK, and rand(x) is a function for generating a random variable in a range from 0 to x-1.

5. The method of claim 2, wherein the position to transmit the ACK or NACK at is determined randomly based on a system frame number (SFN), a DL DPCH slot index, the number of data bits transmitted on the DL DPDCH, and the number (p) of bits required to transmit the ACK or NACK.

6. The method of claim 2, wherein the position to transmit the ACK or NACK at is determined by

$$\mathbf{P(i) = \{SFN \times 15slots + current\_slot\_number\} mod(N_{data} - p + 1)}$$

where P(i) indicates a position to transmit the ACK/NACK in an ith slot, current_slot_number is a current slot index of the DL DPCH, SFN is the SFN of a current cell, N_{data} is the number of data bits in one DL DPCH slot, and p is the number of bits required to transmit the ACK/NACK.

7. The method of claim 1, wherein the ACK or NACK is transmitted distributed across N slots forming a TTI of the DL DPCH.

8. The method of claim 7, wherein the position to transmit the ACK or NACK at is determined randomly based on the number of data bits transmitted on the DL DPDCH, the number (p) of bits required to transmit the ACK or NACK, and the number (N) of slots included in the TTI.

9. The method of claim 7, wherein the position to transmit the ACK or NACK at is determined by

$$P(i) = \begin{cases} rand(N_{data} - \lfloor p/N \rfloor + 1), & n = 0,1,\ldots,N-2 \\ rand(N_{data} - (p - \lfloor p/N \rfloor \times (N-1)) + 1), & n = N-1 \end{cases}$$

where P(i) indicates a position to transmit the ACK or NACK in an ith slot, $\lfloor x \rfloor$ is a maximum natural number equal to or less than x, N_{data} is the number of data

bits in one DL DPCH slot, p is the number of bits required to transmit the ACK/NACK, rand(x) is a function for generating a random variable in a range from 0 to x-1, n is a slot index in a TTI (n=0, 1, . . ., N-1), N is the number of slots in one TTI. and n=i modulo N, modulo being an operation that computes the remainder of a division.

10. The method of claim 7, wherein the position to transmit the ACK or NACK at is determined by

$$P(i) = \{SFN \times 15slots + current\_slot\_number\} \bmod (N_{data} - \lfloor p/N \rfloor + 1), \quad n = 0,1,\ldots,N-2$$

$$P(i) = \{SFN \times 15slots + current\_slot\_number\} \bmod (N_{data} - (p - \lfloor p/N \rfloor \times (N-1)) + 1), \quad n = N-1$$

where P(i) indicates a position to transmit the ACK/NACK in an ith slot, current_slot_number is a current slot index of the DL DPCH, SFN is the SFN of a current cell, N_{data} is the number of data bits in one DL DPCH slot, p is the number of bits required to transmit the ACK/NACK, n is a slot index in a TTI (n=0, 1, . . ., N-1), N is the number of slots in one TTI, and n=i modulo N, modulo being an operation that computes the remainder of a division.

11. An apparatus for requesting an uplink data retransmission in a CDMA (Code Division Multiple Access) communication system using a downlink dedicated physical channel (DL DPCH) to which a downlink dedicated physical control channel (DL DPCCH) and a downlink dedicated physical data channel (DL DPDCH) are mapped, the DL DPCCH having a transport power control (TPC) field, a transport format combination indicator (TFCI) field, and a pilot field, and the DL DPDCH having first and second data fields for delivering downlink data, comprising:

a puncturer for generating a p-bit acknowledgement (ACK) if data received on an enhanced uplink dedicated channel (EUDCH) is normal or a p-bit non-acknowledgement (NACK) if data received on the EUDCH is abnormal, and puncturing p bits in a position to transmit the ACK or NACK in the first and second data fields of the DL DPDCH, said position determined under a predetermined control;

a puncturing controller for determining the position to transmit the ACK or NACK in the first and second data fields of the DL DPDCH; and

a DL DPCH transmitter for inserting the ACK or NACK in the punctured bit positions and transmitting the DL DPCH with the ACK or NACK.

12. The apparatus of claim 11, wherein the puncturing controller determines the puncturing position for the ACK or NACK so that the ACK or NACK is transmitted in one of N slots forming a transmit time interval (TTI) of the DL DPCH.

13. The apparatus of claim 12, wherein the puncturing controller determines the puncturing position for the ACK or NACK randomly according to the number of data bits transmitted on the DL DPDCH and the number (p) of bits required to transmit the ACK or NACK.

14. The apparatus of claim 12, wherein the puncturing controller determines the puncturing position for the ACK or NACK by

$$\mathbf{P(i) = rand(N_{data} - p + 1)}$$

where P(i) indicates a position to transmit the ACK/NACK in an ith slot, N_{data} is the number of data bits in one DL DPCH slot, p is the number of bits required to transmit the ACK/NACK, and rand(x) is a function for generating a random variable in a range from 0 to x-1.

15. The apparatus of claim 12, wherein the puncturing controller determines the puncturing position for the ACK or NACK randomly based on a system frame number (SFN), a DL DPCH slot index, the number of data bits transmitted on the DL DPDCH, and the number (p) of bits required to transmit the ACK or NACK.

16. The apparatus of claim 12, wherein the puncturing controller determines the puncturing position for the ACK or NACK by

$$\mathbf{P(i) = \{SFN \times 15slots + current\_slot\_number\} mod(N_{data} - p + 1)}$$

where P(i) indicates a position to transmit the ACK/NACK in an ith slot,

current_slot_number is a current slot index of the DL DPCH, SFN is the SFN of a current cell, N_{data} is the number of data bits in one DL DPCH slot, and p is the number of bits required to transmit the ACK/NACK.

17. The apparatus of claim 11, wherein the puncturing controller determines the puncturing position for the ACK or NACK so that the ACK or NACK is transmitted distributedly across N slots forming a TTI of the DL DPCH.

18. The apparatus of claim 17, wherein the puncturing controller determines the puncturing position for the ACK or NACK randomly based on the number of data bits transmitted on the DL DPDCH, the number (p) of bits required to transmit the ACK or NACK, and the number (N) of slots included in the TTI.

19. The apparatus of claim 17, wherein the position to transmit the ACK or NACK at is determined by

$$P(i) = \begin{cases} rand(N_{data} - \lfloor p/N \rfloor + 1), & n = 0,1,\ldots,N-2 \\ rand(N_{data} - (p - \lfloor p/N \rfloor \times (N-1)) + 1), & n = N-1 \end{cases}$$

where P(i) indicates a position to transmit the ACK or NACK at in an ith slot, $\lfloor x \rfloor$ is a maximum natural number equal to or less than x, N_{data} is the number of data bits in one DL DPCH slot, p is the number of bits required to transmit the ACK/NACK, rand(x) is a function for generating a random variable in a range from 0 to x-1, n is a slot index in a TTI (n=0, 1, . . ., N-1), N is the number of slots in one TTI, and n=i modulo N, modulo being an operation that computes the remainder of a division.

20. The apparatus of claim 17, wherein the puncturing controller determines the puncturing position for the ACK or NACK by

$$P(i) = \{SFN \times 15slots + current\_slot\_number\} \bmod (N_{data} - \lfloor p/N \rfloor + 1), \quad n = 0,1,\ldots,N-2$$

$$P(i) = \{SFN \times 15slots + current\_slot\_number\} \bmod (N_{data} - (p - \lfloor p/N \rfloor \times (N-1)) + 1), \quad n = N-1$$

where P(i) indicates a position to transmit the ACK/NACK in an ith slot, current_slot_number is a current slot index of the DL DPCH, SFN is the SFN of a current cell, N_{data} is the number of data bits in one DL DPCH slot, p is the number of bits required to transmit the ACK/NACK, n is a slot index in a TTI (n=0, 1, . . ., N-1), N is the number of slots in one TTI, and n=i modulo N, modulo being an operation that computes the remainder of a division.

21. A method of receiving an uplink data retransmission request in a CDMA (Code Division Multiple Access) communication system using a downlink dedicated physical channel (DL DPCH) to which a downlink dedicated physical control channel (DL DPCCH) and a downlink dedicated physical data channel (DL DPDCH) are mapped, the DL DPCCH having a transport power control (TPC) field, a transport format combination indicator (TFCI) field, and a pilot field, and the DL DPDCH having first and second data fields for delivering downlink data, comprising the steps of:

transmitting data on an enhanced uplink dedicated channel (EUDCH), and receiving a DL DPCH signal;

determining a position to receive a p-bit acknowledgement (ACK) or a p-bit non-acknowledgement (NACK) in the first and second data fields of the DL DPDCH; and

extracting p bits at the determined position as the ACK or NACK.

22. The method of claim 21, wherein the ACK or NACK is received in one of N slots forming a transmit time interval (TTI) of the DL DPCH.

23. The method of claim 22, wherein the position to receive the ACK or NACK at is determined randomly based on the number of data bits transmitted on the DL DPDCH and the number (p) of bits required to represent the ACK or NACK.

24. The method of claim 21, wherein the ACK or NACK is received distributed across N slots forming a TTI of the DL DPCH.

25. The method of claim 24, wherein the position to receive the ACK or NACK at is determined randomly based on the number of data bits

transmitted on the DL DPDCH, the number (p) of bits required to represent the ACK or NACK, and the number (N) of slots included in the TTI.

26. An apparatus for receiving an uplink data retransmission request in a CDMA (Code Division Multiple Access) communication system using a downlink dedicated physical channel (DL DPCH) to which a downlink dedicated physical control channel (DL DPCCH) and a downlink dedicated physical data channel (DL DPDCH) are mapped, the DL DPCCH having a transport power control (TPC) field, a transport format combination indicator (TFCI) field, and a pilot field, and the DL DPDCH having first and second data fields for delivering downlink data, comprising the steps of:

a DL DPCH receiver for transmitting data on an enhanced uplink dedicated channel (EUDCH), and receiving a DL DPCH signal;

a puncturing controller for determining a position to receive a p-bit acknowledgement (ACK) or a p-bit non-acknowledgement (NACK) in the first and second data fields of the DL DPDCH; and

a puncturer for extracting p bits at the determined position as the ACK or NACK.

27. The apparatus of claim 26, wherein the ACK or NACK is received in one of N slots forming a transmit time interval (TTI) of the DL DPCH.

28. The apparatus of claim 27, wherein the puncturing controller determines the position to receive the ACK or NACK randomly based on the number of data bits transmitted on the DL DPDCH and the number (p) of bits required to represent the ACK or NACK.

29. The apparatus of claim 25, wherein the ACK or NACK is received distributed across N slots forming a TTI of the DL DPCH.

30. The apparatus of claim 29, wherein the puncturing controller determines the position to receive the ACK or NACK randomly based on the number of data bits transmitted on the DL DPDCH, the number (p) of bits required to represent the ACK or NACK, and the number (N) of slots included in

the TTI.

31. A method of requesting an uplink data retransmission in a CDMA (Code Division Multiple Access) communication system using a downlink dedicated data channel for delivering downlink data, comprising the steps of:

receiving data on an uplink dedicated channel, generating a p-bit acknowledgement (ACK) if the received data is normal, and generating a p-bit non-acknowledgement (NACK) if the received data is abnormal;

determining a position to transmit the ACK or NACK in the downlink dedicated data channel; and

puncturing p bits in the determined position, inserting the ACK or NACK in the punctured bit positions, and transmitting the downlink dedicated data channel with the ACK or NACK.

32. The method of claim 31, wherein the ACK or NACK is transmitted in one of N slots forming a transmit time interval (TTI) of the downlink dedicated data channel.

33. The method of claim 32, wherein the position to transmit the ACK or NACK at is determined randomly based on the number of data bits transmitted on the downlink dedicated data channel and the number (p) of bits required to transmit the ACK or NACK.

34. The method of claim 32, wherein the position to transmit the ACK or NACK at is determined randomly based on a system frame number (SFN), a slot index of the dedicated physical channel, the number of data bits transmitted on the dedicated physical channel, and the number (p) of bits required to transmit the ACK or NACK.

35. The method of claim 31, wherein the ACK or NACK is transmitted distributed across N slots forming a TTI of the downlink dedicated data channel.

36. The method of claim 35, wherein the position to transmit the

ACK or NACK at is determined randomly based on the number of data bits transmitted on the downlink dedicated data channel, the number (p) of bits required to transmit the ACK or NACK, and the number (N) of slots included in the TTI.

37. The method of claim 2, wherein the position to transmit the ACK or NACK at is determined randomly based on a connection frame number (CFN), a slot index of the DL DPCH, the number of data bits transmitted on the DL DPDCH, and the number (p) of bits required to transmit the ACK or NACK.

38. The apparatus of claim 12, wherein the puncturing controller determines the position to transmit the ACK or NACK randomly based on a CFN, a slot index of the DL DPCH, the number of data bits transmitted on the DL DPDCH, and the number (p) of bits required to transmit the ACK or NACK.

39. The method of claim 32, wherein the puncturing controller determines the position to transmit the ACK or NACK randomly based on a CFN, a slot index of the dedicated physical channel, the number of data bits transmitted on the dedicated physical data channel, and the number (p) of bits required to transmit the ACK or NACK.

40. The method of claim 6, wherein the SFN is set to a different value for each cell.

41. The method of claim 37, wherein the CFN is set to a different value for each cell by assigning a different offset to the cell.

42. The apparatus of claim 16, wherein the SFN is set to a different value for each cell.

43. The apparatus of claim 38, wherein the CFN is set to a different value for each cell by assigning a different offset to the cell.

44. The method of claim 10, wherein the SFN is set to a different value for each cell.

45. The apparatus of claim 20, wherein the SFN is set to a different value for each cell.

46. The method of claim 39, wherein the CFN is set to a different value for each cell by assigning a different offset to the cell.